

REMARKS/ARGUMENTS

Initially, Applicants would like to thank the Examiner for the detailed Official Action, and for acknowledging that the drawings are acceptable. Applicants also wish to thank the Examiner for acknowledging Applicants' claim for foreign priority, and that the certified copies of the priority documents have been received. Additionally, Applicants would like to thank the Examiner for considering the materials cited in the Information Disclosure Statement filed in the present application on November 27, 2006, by the return of the signed copy of the form PTO-1449 attached to the Official Action.

In the Official Action, claims 1-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over HASHIMOTO et al. (U.S. Patent No. 7,119,350 B2) in view of SPIRIG et al. (U.S. Patent No. 5,856,667).

Upon entry of the amendment, claims 1-15 have been amended. New claim 16 has been added. Thus, claims 1-16 are currently pending for consideration by the Examiner.

Claims 1-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over HASHIMOTO in view of SPIRIG. The Official Action asserts that HASHIMOTO discloses most of the features recited in independent claim 1. The Official Action acknowledges that HASHIMOTO does not explicitly disclose an evaluation unit. However, the Official Action asserts that SPIRIG discloses an evaluation unit (15) that is used to calculate the parameters of detected radiation signals corresponding to image sensor elements (16), and concludes that independent claim 1 would have been obvious.

While it may be argued that SPIRIG discloses an evaluation unit to calculate measurements from the signals recorded in an image sensor, Applicants submit that SPIRIG does not disclose an evaluator configured as explicitly recited in amended independent claim 1.

Applicants submit that SPIRIG's Figure 1 and corresponding description disclose a clock generator (14) that is used to control the signals that are recorded in the image sensor (13), wherein the image sensor (13) supplies the signals to an evaluation unit (15). Applicants submit that the evaluation unit (15) calculates measurements and passes the calculated measurements on to a display unit (which is not illustrated in SPIRIG's Figure 1).

Applicants submit that SPIRIG's Figure 2 illustrates the structure of an image sensor (13), which comprises nine identically constructed sensor elements, which form a 3x3 image sensor field. Applicants also submit that each of SPIRIG's sensor elements (16) comprises a light-sensitive part (17), on which the intensity-modulated radiation field occurs, and a number of signal charges are produced, corresponding to the intensity of the radiation field. Thus, Applicants submit that while SPIRIG may disclose the provision of an evaluation unit (15) that is configured to calculate measurements based on the detected and demodulated signal from the image sensor (13), SPIRIG fails to disclose an evaluator as explicitly recited in amended independent claim 1.

More specifically, amended independent claim 1 explicitly recites that the evaluator is configured to *evaluate the target space according to a difference between electric charges collected in the one of said two different phase periods by said charge storage formed in one of said at least two photoelectric converters, and electric charges collected in an other phase period by said charge storage formed in the other one of said at least two photoelectric converters* (emphasis added). Amended independent claim 1 also recites that the *at least two photoelectric converters receive light from the target space, into which a flashing light is being irradiated*. Amended independent claim 1 further recites that the evaluator *evaluates the target space by use of a difference between the electric charges collected in a lighting period of said*

flashing light by said charge storage formed in one of said photoelectric converters, and the electric charges collected in a non-lighting period of said flashing light by said charge storage formed in the other one of said photoelectric converters (emphasis added). Applicants submit that SPIRIG at least fails to disclose the above-recited features of Applicants' amended independent claim 1.

Applicants submit that their evaluator evaluates the target space based on the difference, i.e., the electric charges corresponding to a light amount of an intensity modulated light from which environmental light is reduced. More specifically, Applicants submit that the evaluator uses the difference between IML+EL and EL, where IML is the intensity modulated light and EL is the environmental light. Applicants submit that since the environmental light EL is usually relatively constant during a detection time period, it is thus possible to effectively reduce the influence of environmental light EL, through the use of the specifically configured evaluator as explicitly recited in independent claim 1.

In distinct contrast, Applicants submit that SPIRIG's intensity modulated light is a continuous light, which is illustrated in SPIRIG's Figure 4. As a result, Applicants submit that the influence of the environmental light can not be effectively reduced. Thus, Applicants further submit that SPIRIG's evaluation unit is distinctly different from the specifically configured evaluator, as recited in Applicants' amended independent claim 1.

For at least the reasons discussed above, Applicants submit that amended independent claim 1 would not have been obvious to one of ordinary skill in the art at the time of the invention in view of the combination of HASHIMOTO and SPIRIG. Additionally, Applicants submit that claims 2-15, which depend either directly or indirectly from amended independent claim 1, are also patentable for at least the reasons discussed above regarding amended

independent claim 1, and further for the additional features recited therein. Accordingly, Applicants respectfully request that the rejection of claims 1-15 under 35 U.S.C. § 103(a) as being unpatentable over HASHIMOTO in view of SPIRIG be withdrawn.

Further, Applicants submit that new independent claim 16 is patentable for reasons similar to the reasons discussed above regarding independent claim 1, since new independent claim 16 recites features similar to amended independent claim 1. Accordingly, Applicants respectfully request that an indication of the allowability of claims 1-16 be provided in the next Official communication.

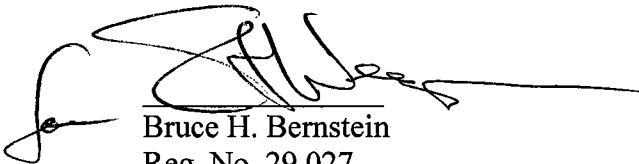
SUMMARY

From the amendments, arguments, and remarks provided above, Applicants submit that all of the pending claims in the present application are patentable over the references cited by the Examiner, either alone or in combination. Accordingly, reconsideration of the outstanding Official Action is respectfully requested and an indication of allowance of claims 1-16 is now believed to be appropriate.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejections is made by the present amendment. All other amendments to the claims which have been made by this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should there be any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,
Hideki KAWAHARA et al.



Bruce H. Bernstein
Reg. No. 29,027

August 3, 2009
GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191
(703) 716-1191

Steven Wegman
Reg. No. 31,438